Utilize tiered storage to match investment with information value for small and medium businesses

IBM System Storage DS3400

Highlights

- ***4 Gbps Fibre Channel interface technology***
- ***Easy to deploy and manage with the DS3000 Storage Manager***
- ***Combination of 12 SAS or SATA 3.5" drives per enclosure***
- ***Expandable by attaching up to three EXP3000s, a total of 14.4 TB of storage capacity with 300 GB SAS or up to 36.0 TB with 750 GB SATA***
- ***Flexible for use with IBM System x™ and BladeCenter® servers***
- ***Affordable for the small and medium business budgets***
- ***Telco model supports -48v DC power supplies***
- ***NEBS and ETSI compliance for AC and DC models***

As a business matures, so does the amount of data and the value it holds within the organization. If the data is distributed across servers and individual storage systems, the business will face increased cost, complexity and the accompanying business risks.

The IBM System Storage™ DS3400 leads the way for these organizations to take advantage of consolidating and sharing this data within a direct-attach or SAN solution. With SAS and SATA drive intermix support, the DS3400 can be optimized with the right workload demand utilizing the appropriate drive technology. The DS3400 offers the opportunity to meet the demands of data expansion, data availability and flexibility in a simple, affordable disk system.

Select configurations of the DS3400 are part of the IBM Express Portfolio™, designed and priced to meet the needs of mid-sized businesses. The Express models combine the DS3400 storage system with the Fibre Channel cables and SFP transceivers to help you get started with storage quickly.

Easy to deploy and manage

With the majority of small business IT departments having one or a part-time administrator and limited time to spend on data management, the DS3400 can be easily installed without extensive knowledge or effort.

The DS3000 Storage Manager software was designed for simple implementation by an unseasoned administrator. The task-oriented management interface of the DS3000 Storage Manager presents tasks to the administrator first, and then asks on which object to perform the task. This contrasts with an object-oriented interface of a typical system in which the object is first selected, and then the task, which requires a higher depth of storage networking expertise. The DS3000 Storage Manager approach enables even non-Storage administrators to quickly set up and deploy the storage solution. The management application's task-oriented interface removes the resistance that many organizations have with their limited in-house expertise.

Tiered storage solution

Tiered storage is the assignment of different categories of data to different types of drives in order to reduce total storage cost. A key attribute of the DS3000 series of disk systems is the integration of SAS and SATA technologies within a single enclosure. By accommodating high-access and near-line data within a single enclosure, the right application with the appropriate drive technology is achieved. This simplifies purchasing and storage deployment with near-line applications utilizing inexpensive SATA drives and highly-utilized applications deploying SAS drives. Tiered storage solutions help match your IT investment with your information value to maximize the return on your IT investments.

Expand with multiple EXP3000s

The scalability of the DS3400 allows IT managers to respond to a constantly changing storage environment. By starting small, the DS3400 allows users to make additional investments in their infrastructure when data growth necessitates; thus organizations can easily

increase capacity and storage capabilities with minimal cost and effort. The DS3400 capacity is increased by adding hard disk drives or by expanding the configuration and adding EXP3000 expansion units. Both these operations can be done without shutting down the DS3400. This means "zero-impact" to your environment and gives the user control of data storage with the ability to expand capacity on an as-needed basis.

Flexible approach to storage

The DS3400 is a comprehensive storage solution for IBM System x, BladeCenter and select third-party servers. This flexibility allows you to break free of server barriers and use a single storage solution in a mixed vendor environment. And because you do not have to sacrifice functionality for affordability, the DS3400 disk storage system can deliver powerful dynamic capabilities that help you protect data. The disk storage system enables copy and disaster recovery features such as FlashCopy® and VolumeCopy that can be enabled when required by your application.

Telco Options

The IBM System Storage DS3400 includes a DC powered model that is especially suited for Telco industry environments. The IBM System Storage DS3400 Model 42T, a NEBS-3 and ETSI compliant disk system, and the IBM System Storage EXP3000 Model 02T storage expansion unit are both designed to be powered from a -48 V DC Telco industry-standard power supply.

Priced right for small business

With the functionality and availability features that come standard and a price point that does not strain the budget, the DS3400 is the simple choice for small and medium businesses. Other storage products require the purchase of expensive options for basic storage configurations. The DS3400 is an out-of-the-box solution that will satisfy the majority of storage needs.

IBM System Storage DS3400 at a glance

Models	1726-41X—single controller 1726-42X—dual controller 1726-42T—dual controller Telco 1726-41E—single controller Express 1726-42E—dual controller Express
RAID controller	Dual active
Cache per controller	512 MB battery-backed cache with 1 GB upgrade option
Host interface	2 host ports per controller, Fibre Channel (FC) 4 Gbps auto-sensing 1 Gbps/2 Gbps
Drive interface	Serial Attached SCSI (SAS) Serial ATA (SATA)
Supported drives	Supports 3 Gbps: 73 GB, 146 GB and 300 GB SAS drives at 10,000 rpm and 36 GB, 73 GB, 146 GB and 300 GB SAS drives at 15,000 rpm speeds 3 Gbps: 500 GB and 750 GB SATA drives at 7,200 rpm speed
RAID levels	RAID-0, -1, -3, -5, -10
Storage partitions	2, 4, 16
Maximum drives supported	48 SAS and/or SATA drives (using three EXP3000 Expansion Units)
Fans and power supplies	Dual-redundant, hot-swappable
Rack support	19" industry-standard rack
Management software	IBM System Storage DS3000 Storage Manager
SAN support	Supported IBM FC switches
Warranty[1]	Three-year parts and labor warranty

IBM System Storage DS3400 at a glance

Size	Height: 8.7 cm (3.4 in.) Depth: 55.0 cm (21.6 in.) Width: 44.7 cm (17.6 in.) Weight: approximately 17.2 kg (38.0 lb) for a standard unit; when fully configured, 29.2 kg (64.5 lb)
Environment	Air temperature: – DS3400 on: 10° to 35°C (50.0° to 95°F); altitude: 30.5 (100 ft) below to 3000 m (9840 ft) above sea level; temperature change: 10°C (18°F) per hour – DS3400 off: 10° to 50°C (14.0° to 120.0°F); maximum altitude: 3000 m (9840 ft); temperature change: 15°C (27.0°F) per hour Humidity: – DS3400 on: 20% to 80% – DS3400 off: 10% to 90% – Maximum dew point: 26°C (79°F) – Maximum humidity gradient: 10% per hour
Heat output	Approximate heat output in British thermal units (Btu) per hour: – Minimum configuration: 205 Btu (60 watts) – Maximum configuration 1235 Btu (361 watts)
Supported systems	For a list of currently supported servers, operating systems, host bus adapters, clustering applications, SAN switches and directors, refer to the DS3000 series Interoperability Matrix available at **ibm.com**/systems/storage/disk/ds3000/ds3400/

For more information

Contact your IBM representative or IBM Business Partner or visit:

- **ibm.com**/systems/storage/disk
- **ibm.com**/systems/x
- **ibm.com**/systems/bladecenter

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MB, GB, and TB = 1,000,000, 1,000,000,000 and 1,000,000,000,000 bytes, respectively, when referring to storage capacity. Accessible capacity is less; up to 3 GB is used in service partition. Actual storage capacity will vary based upon many factors and may be less than stated. Some numbers given for storage capacities give capacity in native mode followed by capacity using data compression technology. Maximum internal hard disk and memory capacities may require the replacement of any standard hard drives and/or memory and the population of all hard disk bays and memory slots with the largest currently supported drives available.

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